

## University of Dundee

### Asking different questions

Kennedy, Holly Powell; Yoshida, Sashiyo; Costello, Anthony; Declercq, Eugene; Dias, Marcos A; Duff, Elizabeth

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Unacceptably high rates of adverse outcomes persist for childbearing women and infants, including maternal and newborn mortality, stillbirth, and short- and long-term morbidity.<sup>1</sup> In light of the challenges to achieve the UN Sustainable Development Goals, it is timely to reconsider priorities for research in maternal and newborn health. Are we asking the right questions?<sup>2</sup> Recent evidence indicates the importance of seeking knowledge beyond the treatment of complications, to inform better ways of providing sustainable, high quality care, including preventing problems before they occur.<sup>3</sup>

The 2014 publication of the Lancet Series on Midwifery presented a unique opportunity to generate future areas of inquiry by drawing on the most extensive examination to date of evidence on the care that all women and newborn infants need across the continuum from pre-pregnancy, birth, postpartum, and the early weeks of life.<sup>4-6</sup> The series summarized the evidence base for quality maternal and newborn care ([QMNC](#)) in a new framework that focuses on the needs of women, infants and families and differentiates between what care is provided, how it is provided and by whom.<sup>4</sup> These are concepts that are often confused or ignored in existing studies. Midwifery was identified as a cost-effective and fundamentally important element of quality care, with the potential to improve over 50 different maternal and newborn outcomes including mortality and morbidity. However, there are substantive barriers to proper implementation and integration of midwifery into health systems.<sup>1</sup>

We adapted the Child Health and Nutrition Research Initiative (CHNRI) methodology to score competing future research topics on quality maternal and newborn care and the contribution of midwifery to that care.<sup>7</sup> This method has been used to set health research priorities for infant and childhood conditions,<sup>8-9</sup> reduction of maternal and perinatal mortality,<sup>2</sup> and preterm birth and stillbirths.<sup>10</sup>

A team representing expertise in maternal and newborn health research, including authors from the Lancet Series on Midwifery, contributors from WHO, UNFPA, the International Confederation of Midwives, and a representative of/advocate for service users conducted the work. The team identified 30 research topics based on an analysis of gaps in the evidence presented in the 2014 Lancet Series on Midwifery. Stakeholders were asked to consider the potential research topics in terms of their relevance, significance, and potential future implementation based on five criteria: answerability, community involvement, sustainability, equity, and maximal impact.<sup>7</sup> The 30 research topics and scoring criteria were distributed in English/French/Spanish online surveys to 1191 stakeholders, including constituents of the global Partnership for Maternal, Newborn, and Child Health (PMNCH) and representatives from all WHO regions. Stakeholders were asked to score each of the 30 research topics as 1.0 (Yes), 0.5 (Informed but undecided answer), or 0 (No) on whether it

met each of the five criteria. It was possible to omit a score if a respondent did not feel confident to decide on a criterion and were considered missing data and not part of the denominator. Summary scores for each criterion and an overall score were then computed as the sum of the scores divided by the number of actual scorers.

Responses were received from all WHO regions with a total response rate of 23% (n=271). Most (83%) responses were submitted in English, 13% in French, and 4% in Spanish. The highest proportion (24%) of those who provided demographic information came from the Western Pacific Region and the lowest (2.6%) from Southeast Asia. Over a quarter (26%) came from the academic/research/training institution sector of the PMNCH constituents. Of the 199 respondents who identified themselves as health professionals, 168 (84%) were in roles associated with maternal and child health.

Our goal was to identify the top 10 priorities; however, two scored equally, and so the top 11 are presented in the Table. The stakeholders prioritized research that would increase knowledge about ways to prevent complications and reduce unnecessary interventions, strengthen women's own capabilities, and optimize biological, social, and cultural processes. They also identified the importance of examining the role of midwifery in providing quality care for all women and infants. Stakeholders also identified research to improve skilled, knowledgeable, and compassionate care provided by an appropriate workforce that ensures timely referral when complications arise. The top two priorities indicate the fundamental importance of effective family planning services and of quality care to reduce rates of preterm birth, low birth weight, stillbirth, and perinatal mortality. Evidence indicates that midwifery care can be a key intervention to improve these outcomes, but more research is urgently needed to determine clinically and cost-effective models of care in diverse settings, especially in low resource areas.<sup>11</sup> A focus on new measures and indicators of care components that have not traditionally been well-examined will enable new benchmarks to be set for developing systems of care that meet the needs of all women and newborns.

The priorities identified reveal broad knowledge domains rather than individual research questions. Research funding in the past has often targeted management of critical situations that contribute to high mortality, such as hemorrhage, hypertensive disorders, obstructed labor, preterm birth, and sepsis.<sup>12</sup> The priorities identified in this study do not eschew the importance of complication management, but potentially restore balance by moving toward a focus on prevention. Studying ways of providing such care has the potential to improve the provision of quality care for all, enhance women's and infants' own capabilities, and maximize the health promotion potential of midwives. The Global Strategy for Women's, Children's and Adolescents' Health 2016-2030 is designed to help women, children, and adolescents survive, thrive, and transform.<sup>13</sup> The concepts of thriving and

73 transforming particularly resonate with the research priorities identified in this exercise.  
74 Importantly, this new knowledge could contribute to achieving Sustainable Development  
75 Goal 3, for healthy lives and well-being for all people. Investment in these innovative  
76 priorities has the potential to enable the rights of women and children to life and to health,  
77 and help women, infants and families to survive and thrive. It would be transformative for  
78 families, communities, and science.

79

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